



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 5 : A45F 4/12, A41D 15/04		A1	(11) International Publication Number: WO 93/25114
(43) International Publication Date: 23 December 1993 (23.12.93)			

(21) International Application Number: PCT/GB93/01194

(22) International Filing Date: 4 June 1993 (04.06.93)

(30) Priority data:
9212028.6 5 June 1992 (05.06.92) GB

(71) Applicant (for all designated States except US): DESIGN PROJECTS WORLDWIDE LIMITED [GB/GB]; 97 St. John Street, London EC1M 4AB (GB).

(72) Inventors; and
(75) Inventors/Applicants (for US only) : EDGELL, David, Edward [GB/GB]; Flat 7, The Vicarage, 15 Rockley Road, London W14 (GB). ECCLES, Philip [GB/GB]; 134 Merton Road, London SW18 5SP (GB).

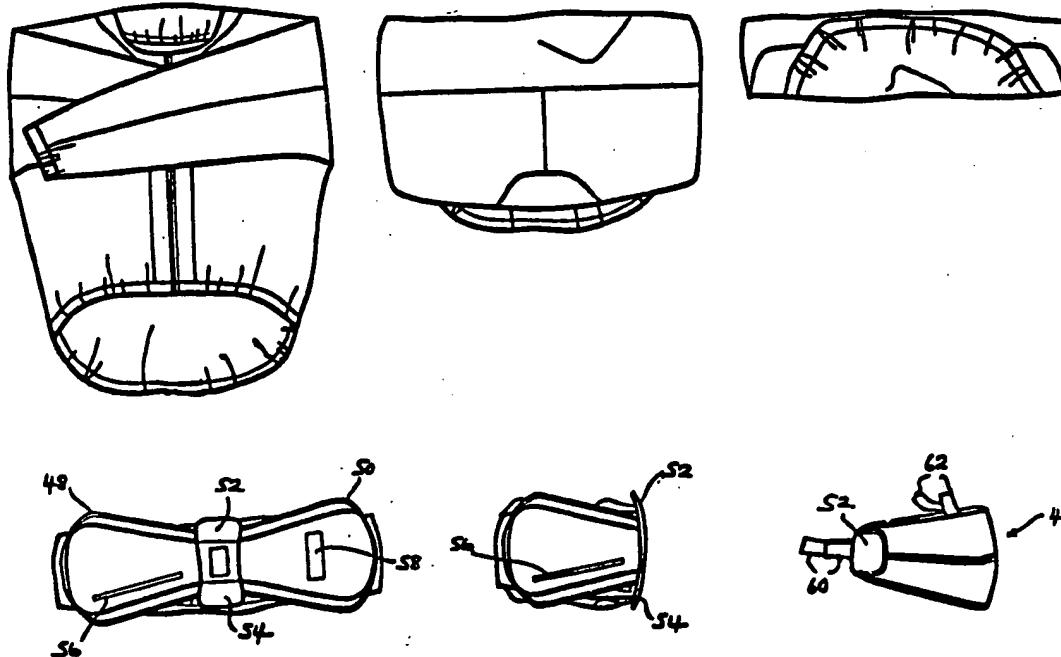
(74) Agent: CUMMINGS, Sean, Patrick; David Keltie Associates, Audrey House Ely Place, London EC1N 6SN (GB).

(81) Designated States: JP, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published

*With international search report.**Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.*

(54) Title: MULTI-PURPOSE BAG



(57) Abstract

A bag (46) comprising at least one storage compartment can be transformed into a further article, such as a jacket (40) or other such garment, with the storage compartment (56) remaining usable after the transformation. The storage compartment (56) is preferably hidden from view when in the garment mode so that any contents of the compartment are not drawn to the attention of pickpockets. The shape of the bag (46) is adapted according to its intended use, for example, it can be generally triangular for securing to the underside of a bicycle saddle.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	FR	France	MR	Mauritania
AU	Australia	GA	Gabon	MW	Malawi
BB	Barbados	GB	United Kingdom	NL	Netherlands
BE	Belgium	GN	Guinea	NO	Norway
BF	Burkina Faso	GR	Greece	NZ	New Zealand
BC	Bulgaria	HU	Hungary	PL	Poland
BJ	Benin	IE	Ireland	PT	Portugal
BR	Brazil	IT	Italy	RO	Romania
CA	Canada	JP	Japan	RU	Russian Federation
CF	Central African Republic	KP	Democratic People's Republic of Korea	SD	Sudan
CG	Congo	KR	Republic of Korea	SE	Sweden
CH	Switzerland	KZ	Kazakhstan	SK	Slovak Republic
CI	Côte d'Ivoire	LJ	Liechtenstein	SN	Senegal
CM	Cameroon	LK	Sri Lanka	SU	Soviet Union
CS	Czechoslovakia	LU	Luxembourg	TD	Chad
CZ	Czech Republic	MC	Mongo	TG	Togo
DE	Germany	MC	Madagascar	UA	Ukraine
DK	Denmark	ML	Mali	US	United States of America
ES	Spain	MN	Mongolia	VN	Viet Nam

- 1 -

MULTI-PURPOSE BAG

BACKGROUND OF THE INVENTION

a) Field of the Invention

The present invention relates to bags which can be easily
5 transformed into other items such as garments, tents and the
like.

b) Description of the Prior Art

The number of people who enjoy outdoor pursuits such as
walking, cycling, mountaineering or merely spectating has
10 increased rapidly over the past few years. Such a rise in
popularity can be attributed not only to people becoming more
health conscious but also because people have more time
available to enjoy leisure activities.

Coupled with this rise in popularity is the need to be
15 adequately equipped for such activities. For example, many
people wish to take with them suitable outdoor clothing to
provide protection against rain or cold weather. However,
because of the nature of some of these pursuits it is highly
inconvenient to have to carry around this extra clothing when
20 the weather is, for example, sufficiently warm or dry for the
clothing to be superfluous. In these circumstances, it is very
useful if the clothing can be folded in such a way that it
does not occupy too much space, but even more useful if, once
folded, the clothing can fulfil other functions.

25 One means of utilising outdoor clothing when not being worn
is to fold the garment in question in such a way that it forms
a bag which stores the garment. While this makes the garment
easier to carry, the bag serves no other function. In a
further example, the garment is folded to form a sort of
30 carrier bag. In the latter case, the folding of the garment
is relied upon to form the pocket or pockets of the bag. The

- 2 -

disadvantage associated with this latter example is that when the bag is transformed back into the garment the pockets cease to exist and the owner then has the problem of finding some other place in which to transfer the contents of the bag.

5 SUMMARY OF THE INVENTION

Accordingly, the main object of the present invention is to provide a multi-purpose bag transformable into at least one further article capable of retaining any contents of the bag even after the transformation.

- 10 To this end, the present invention consists in a bag comprising at least one storage compartment, said bag being transformable into at least one further article, said at least one storage compartment remaining intact after said transformation.
- 15 By means of the invention, the bag can retain its function even after it has been transformed into a further article and the owner does not have to face the problem of transferring the contents of the bag when being used for its further function.
- 20 In a preferred embodiment, the further article into which the bag is transformed comprises an article of clothing, such as a jacket, cape or pair of trousers. However, the further article could instead comprise such items as a tent, sleeping bag or an inflatable raft or dinghy.
- 25 The material which comprises the outer casing of the bag may be detachable from the material which forms the further article, but is preferably permanently secured thereto, for example by stitching to the further article. While material forming the bag's outer casing may be attached to the exterior
- 30 of the further article making access to the storage compartments easy even after transformation from the bag mode,

BEST AVAILABLE COPY

- 3 -

it is preferred to attach the material forming the casing in such a way that the casing is partially or fully positioned on an interior surface of the further article. For example, when the further article is in the form of a garment, such as 5 a jacket, it is preferred that the material forming the casing of the bag is attached in such a way that it is not visible on the exterior of the garment, for example, by attaching it to the interior back panel of the garment. When the garment is lined, it is preferred to attach the casing to the lining 10 so that, for example, when the casing is attached by stitching, even the stitching is not visible on the exterior of the garment. Furthermore, in order to conceal the casing when in the garment mode so that the casing is not visible on either the exterior or the interior of the garment, a panel 15 of material may be provided which can be brought down over the casing. Preferably this panel is comprised of the same or similar material to the lining of the garment. Moreover, the panel can be held in place covering the casing by use of securing means, such as 'VELCRO' (Registered Trade Mark). By 20 concealing the casing, and therefore the storage compartments, any contents held therein are not drawn to the attention of pickpockets.

It can be seen from the above that the present invention also consists a bag which is transformable into at least one 25 further article wherein the bag is concealed following the transformation.

Expressed in another way, the present invention consists a multi-function bag which is transformable into at least one further article, wherein at least the external appearance of 30 the at least one further article is such that there is no indication that it also functions as a bag.

The storage compartment or compartments of the bag should preferably be easily accessible when in the bag mode, for example, access to the compartments may be provided on the

- 4 -

exterior of the bag. In order to ensure that the storage compartments can retain their contents after transformation of the bag into the further article, it is preferred to provide closure means across the access to the compartments.

5 Such closure means can be in the form of zips, hook and eye fasteners, buttons, press studs and the like. The preferred closure means are zips and hook and eye fasteners, 'VELCRO' (Registered Trade Mark) being particularly suitable. Alternatively, or in addition to the closure means, it is 10 preferred that the openings to the storage compartments lie above the compartments when transformed out of the bag mode. This ensures that the contents do not fall out when in the other mode.

When transformed into the further article, the or each storage 15 compartment can retain its contents. Usually the compartments finish up after the transformation on the interior of the article in question. This is particularly advantageous from the point of view of security and of keeping the contents of the compartments dry.

20 When in the bag mode, the bag can be of any convenient shape. In particular, the shape of the bag is preferably chosen to reflect the way in which it is going to be carried. For example, when the further article is to function as a rain cape for cycling, the cape preferably transforms into a bag 25 of generally triangular shape to enable it to be secured to the underside of a bicycle saddle. Alternatively, articles such as jackets, trousers and the like can be transformed into bags which are shaped to be comfortably attached to the waist of the wearer. A further alternative is to provide the bag in 30 a shape suitable for attachment to a rucksack or a golf bag. A person may, for example, have both a tent and a sleeping bag each of which can be transformed according to the invention into bags for subsequent attachment to a rucksack. By attaching the bags to a rucksack the person is able to keep 35 his or her hands free.

- 5 -

The present invention also consists in a multi-function bag which is transformable into at least one further article, wherein the material forming the exterior of the bag is independent of the material required to form the at least one 5 further article.

Expressed in another way, the present invention resides in a multi-function bag which is transformable into at least one further article, wherein the bag itself does not form part of the at least one further article.

10 The multi-function bag may be made from any suitable material. Flexibility is of considerable importance in order to allow the further article to be folded during the transformation process. Thus any flexible material may be used to make the bag. For example, cotton, wool or synthetic materials or any 15 combination thereof are all suitable.

The material chosen for manufacture of the multi-purpose bag will depend largely on the intended function of the article into which the bag is transformed. When the bag is intended to function as a waterproof garment, the material from which 20 it is made should also be waterproof. In this respect, materials which provide a barrier to wind, rain and snow whilst at the same time allowing the body of the wearer to 'breathe' are particularly preferred. 'GORE-TEX' (Registered Trade Mark) and 'ENTRANT' (Registered Trade Mark) are examples 25 of suitable materials.

The material which forms the outer casing of the bag may be the same as or different to the material forming the further article. For example, when the further article comprises a garment, it is preferred to make the garment from a relatively 30 soft, flexible fabric of which there are a great many to choose from. The casing of the bag may be made of the same material or may be made from a stiffer fabric to enable the bag to keep its shape when in the bag mode.

- 6 -

The transformation of the further article into the bag is generally accomplished by a series of folding manoeuvres, in some cases this is preceded by turning the article inside out. From the point of view of security and for aesthetic reasons,

5 it is particularly advantageous to turn the article inside out during the transformation. Preferably, securing means, for example in the form of one or more zips or hook and eye fasteners, are provided to maintain the article in the bag configuration after folding.

10 Preferably attachment means are also provided on the exterior of the bag. These attachment means may, for example, be in the form of one or more straps or belts or simply in the form of a carrying handle, or any combination of thereof. When in the form of a belt, the bag can be worn around the waist of a

15 person; when in the form of a strap, the bag can be secured to the underside of a bicycle saddle or some other equipment, such as a haversack, rucksack or kit-bag. When provided with a pair of generally parallel straps, the bag can itself take the form of a rucksack.

20 When folded into the bag configuration, the or each storage compartment is generally accessible from the bag's exterior. Preferably, the or each storage compartment is in the form of a pocket provided with positive closure means, such as a zip fastener or a hook and eye type fastener, for example 'VELCRO'

25 (Registered Trade Mark).

Access to the or each pocket may be provided on one or more of the bag's surfaces. Each pocket may be entirely separate from another, alternatively two or more pockets may be intercommunicating. For example, intercommunicating pockets

30 may be provided on opposite exterior faces of the bag so that when the bag is being worn around the waist or is attached to a rucksack, for example, access to the pocket which is facing the wearer or the rucksack is still possible through the intercommunicating pocket on the opposite face.

BEST AVAILABLE COPY

- 7 -

To convert the bag into its other mode, the process described above is reversed. In particular, if present, the securing means is first unfastened and the bag is then opened out to form the other article, if necessary by turning inside out.

5 Although the bag then takes on another appearance and function, the one or more storage compartments can continue to fulfil their storage function.

As can be seen from the above, the bag according to the present invention retains its storage capacity even after 10 conversion to its other mode. By means of the present invention therefore the disadvantages of the prior art bags are overcome and the user is not faced with the difficult problem of transferring the contents of the bag to another receptacle.

15 Moreover, after the transformation, it is not apparent that the article also functions as a bag. Thus as well as being aesthetically pleasing, there are advantages in terms of security of the contents of the storage compartments of the bag.

20 BRIEF DESCRIPTION OF THE DRAWINGS

In order that the invention may be more readily understood, reference will now be made to the accompanying drawings in which:-

Figs. 1 to 9 illustrate the transformation of a hooded jacket 25 into a bag.

Figs. 10 to 17 illustrate the transformation of a hoodless jacket into a bag.

Figs. 18 to 26 illustrate the transformation of a cape into a bag.

- 8 -

Figs. 27 to 39 illustrate the transformation of a hooded jacket into a different shape bag.

Figs. 40 to 51 illustrate the transformation of an alternative type of hooded jacket into a bag.

5 Figs. 52 to 63 illustrate the transformation of an alternative hoodless jacket into a bag.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Turning to Figs 1 to 9, a hooded jacket 10 (Fig 1) is transformed into a bag 12 by following the sequence shown in 10 the drawings. Initially, the hood 14 is folded down over the chest part of the body of the jacket (Fig 2) and then the sleeves 16, 18 are folded across the chest (Fig 3). The garment is then folded in half downwards (Fig 4) and the hem 20 folded upwards (Fig 5). The sides 22, 24 of the garment are 15 then folded inwards (Fig 6) and the folded body of the garment is then slipped inside an opening 26 provided on the exterior of the bag on the opposite face to the face with compartments (Fig 7). The opening 26 is subsequently closed by means of a zip fastener 28 (Fig 8) to form the overall shape of the bag 20 12. The opposite face of the bag 12 is provided with storage compartments 30, 32 and 34 each closable either by zip fasteners or hook and eye type fasteners (Fig 9). The shape of the bag thus formed is such as to be suitable for wearing around a person's waist and to this end straps 36, 38 are 25 provided for holding the bag in place. Of course, these straps 36, 38 could be in the form of a belt. The jacket and bag illustrated in these drawings are suitable for all sorts of leisure activities.

Figs 10 to 17 illustrate the transformation of a further type 30 of jacket 40 (Fig 10) into a bag. In this embodiment, the transformation is achieved by firstly turning the jacket inside out (Fig 11), then folding the sleeves 42, 44 across

BEST AVAILABLE COPY

- 9 -

the chest (Fig 12), followed by folding the jacket in half downwards (Fig 13) and then folding in half again upwards (Fig 14). When the jacket is turned over (Fig 15) the elements of the bag 46 are revealed. To form the bag itself, the formation 5 shown (Fig 15) is folded in half (Fig 16) and complementary closure members 48, 50 in the form of a zip fastener are brought into engagement to secure the jacket inside the casing. Flap members 52, 54 are provided to cover the ends of the zip fastener to ensure that the casing cannot be 10 penetrated by rain or snow. These flap members can be kept in place over the zip ends after fastening by means of hook and eye type fasteners, for example 'VELCRO' (Registered Trade Mark). The bag 46 is provided with at least one storage compartments 56. The shape of the casing forming the bag 46 15 (Fig 17) is such that it can be attached to the underside of a bicycle saddle and straps 58, 60, 62 are provided for this purpose.

Figs 18 to 26 illustrate a further garment which is also particularly suitable for use by cyclists. The garment is in 20 the form of a hooded cape 64 (Fig 18) which transforms into a bag 74 having a shape suitable for attaching to a bicycle frame. The cape is provided with a pocket 66 closed by zip fastener 68 which is useful for holding items such as maps. The transformation to the bag format is achieved by turning 25 the garment inside out and placing it face down (Fig 19). The sides 70, 72 are folded inwards to the width of the pocket 66 (Fig 20) and the hem folded upwards towards the shoulder (Fig 21). The hood and shoulder part of the cape are then folded back (Fig 22) and the hood folded up (Fig 23) so that the 30 overall shape of the folded garment corresponds with the dimensions of the pocket 66. When the folded garment is then turned over, the outer casing of the bag is revealed (Fig 24). As in the previously described embodiment, the bag is formed by folding the casing in half (Fig 25) and closing a zip 35 fastener which is provided on the periphery of the casing. On closing the zip, the cape is securely held within the

- 10 -

casing and the user has access to various storage compartments on the exterior of the casing (Fig 26). One such storage compartment is shown at 78. Flaps 80, 82 are again provided to be brought over the ends of the zip opening to prevent the 5 ingress of water. Straps 84, 86, 88 enable the bag 74 to be secured to a bicycle frame or other such object.

Figs 27 to 39 illustrate a hooded jacket 90 (Fig 27) which is transformed by turning the garment inside out (Fig 28), folding the sleeves 92, 94 across the chest and the hood 96 10 down (Fig 29). The jacket is then folded in half downwards (Fig 30) and turned over (Fig 31) to reveal a panel 98. The panel which is initially held in place by means of hook and eye type fasteners 100 is then pulled apart and folded back (Fig 32) to reveal inside the casing 102 of the bag. The 15 folded ensemble is then turned inside out (Fig 33) so that the jacket is neatly stored inside (Fig 34). When this is turned over (Fig 35) the opposite surface comprises that of the outer casing of the bag. Excess material 104 lying beyond the edges of the casing is then folded inwards to come within its 20 boundary (Fig 36). The casing 102 is folded in half (Fig 37) and zip portions 106, 108 are drawn together to form the bag 109. Flaps 110, 112 can be brought over the ends of the zip opening to prevent water ingress. Each face of the bag is provided with a number of intercommunicating storage 25 compartments accessible through openings 114, 116. Straps 118, 120 enable the bag to be fastened to a rucksack, for example, or merely act as carrying handles.

Figs 40 to 51 illustrate a jacket 90a which has different external features to that shown in Figs 27 to 39 but the 30 transformation into the bag follows the same procedure as outlined in the previous paragraph, namely turning inside out, folding, opening and folding back the panel, turning inside out again, etc. Reference numerals bearing the suffix 'a' are used to denote the same features as previously described. The 35 final shape of the bag 109a is also different to that shown

- 12 -

CLAIMS

1. A bag comprising at least one storage compartment, said bag being transformable into at least one further article, said at least one storage compartment remaining intact after said 5 transformation.
2. A bag according to claim 1 wherein, following transformation, the external appearance of the at least one further article is such that there is no indication that it also functions as a bag.
- 10 3. A bag according to claim 2 wherein the bag is wholly concealed following transformation.
4. A bag according to any of the preceding claims wherein the material forming the exterior of the bag is independent of the material required to form the at least one further article.
- 15 5. A bag according to any of the preceding claims wherein said at least one further article comprises an article of clothing.
6. A bag according to claim 5 wherein said at least one further article comprises a jacket or coat.
- 20 7. A bag according to claim 5 or claim 6 wherein said article of clothing is lined and the material forming the exterior of the bag is attached to the lining.
8. A bag according to any preceding claim wherein the shape of the bag is determined by the way in which it is intended to be carried.
- 25 9. A bag according to claim 8 wherein the bag is of generally triangular shape and is capable of being secured to the underside of a bicycle saddle.

- 11 -

in the previous set of drawings. Again, straps 118a, 120a are provided and access to a storage compartment is via zip opening 114a.

Figs 52 to 63 illustrate a further jacket 90b which folds in 5 the same manner as described in the previous two embodiments. Again, features which are the same as previously referred to are given a suffix 'b'. Apart from the difference in the features of the jacket, the shape of the bag 109b into which the jacket is transformed is also different thus providing a 10 yet further variation of the invention.

When it is desired to transform the jackets into the bag mode, the procedures outlined above are reversed. It can be seen that for each of the garments illustrated the capacity to store items in the pockets is retained even when in the bag 15 mode.

While particular embodiments have been described, it should be appreciated that various modifications may be made without departing from the scope of the invention. For example, each of the drawings illustrate jackets, but the invention also 20 extends to other articles of clothing, such as coats, trousers and the like, and also to non-clothing items such as tents, sleeping bags, dinghies and the like.

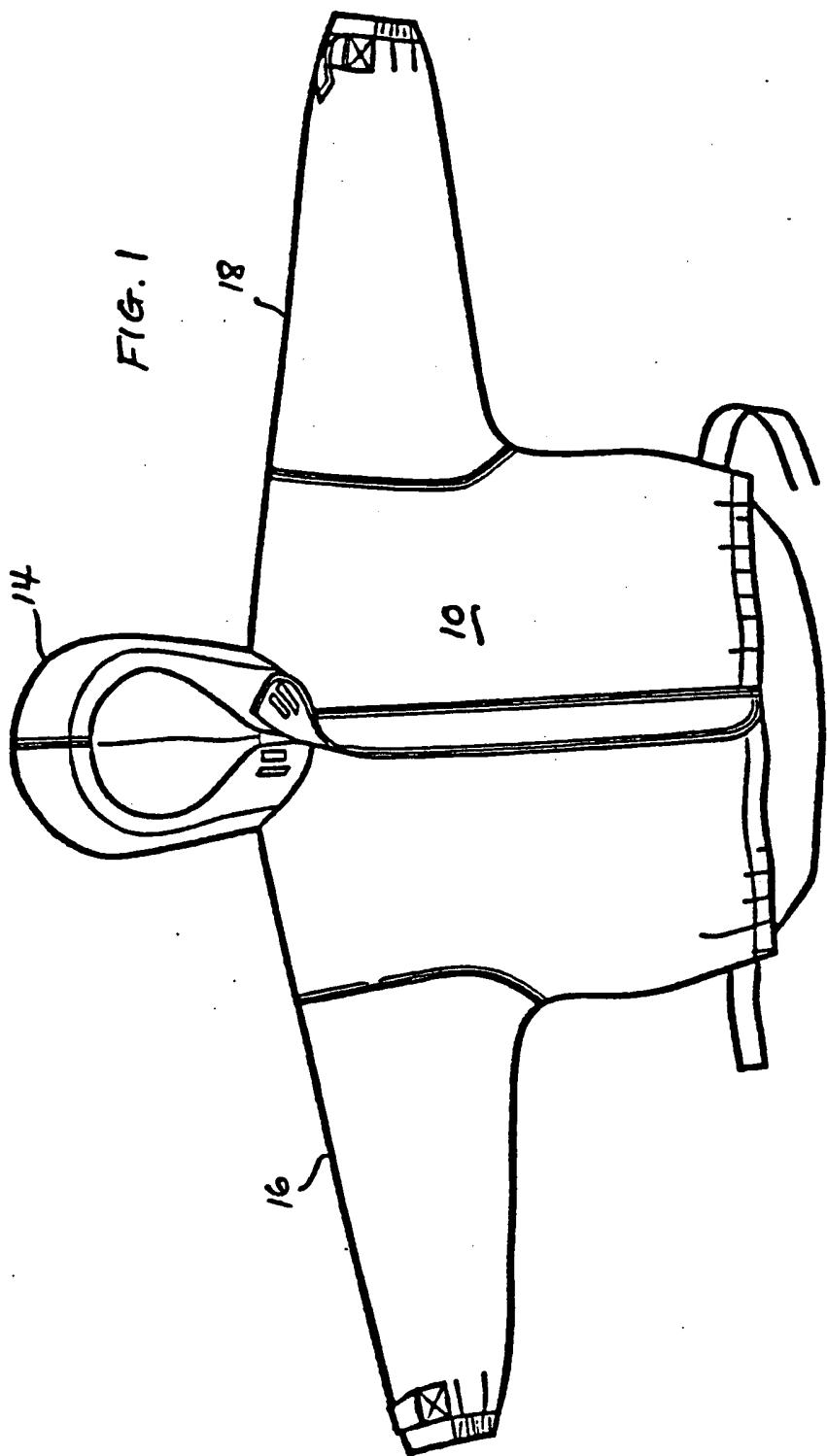
BEST AVAILABLE COPIE

- 13 -

10. A bag according to any preceding claim wherein the transformation comprises unfolding said bag and turning said unfolded bag inside out to form said further article.

11. A bag according to any preceding claim wherein the bag is
5 provided with at least two storage compartments which intercommunicate.

12. A bag as hereinbefore described with reference to the accompanying drawings.



2/21

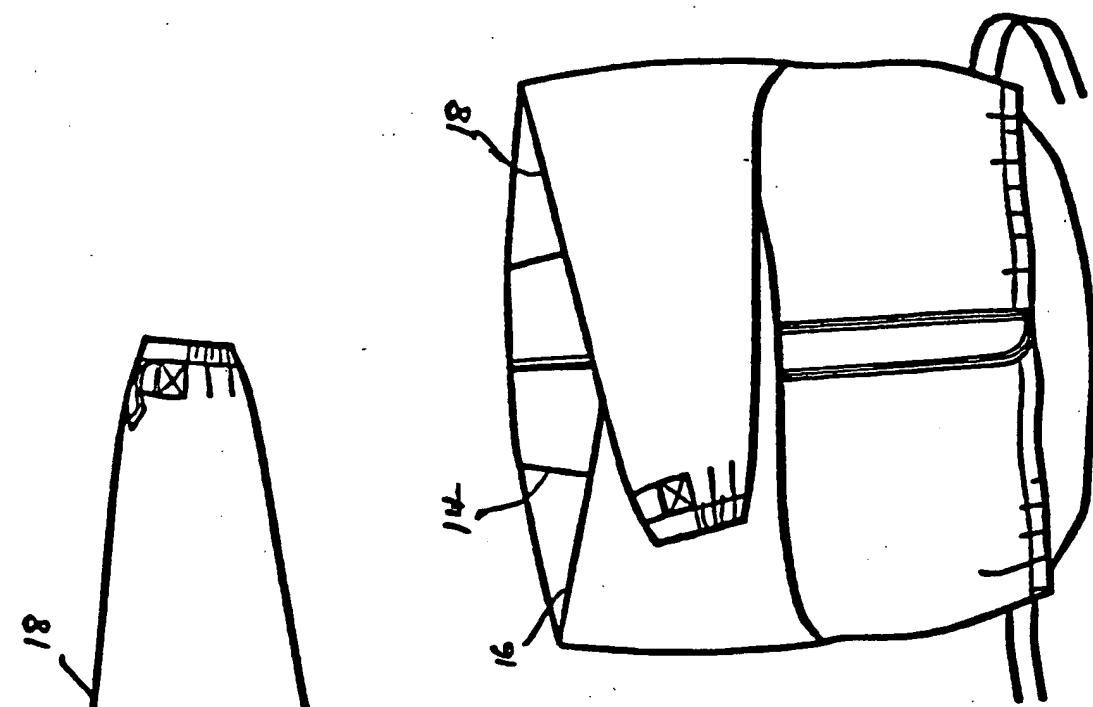


FIG. 3

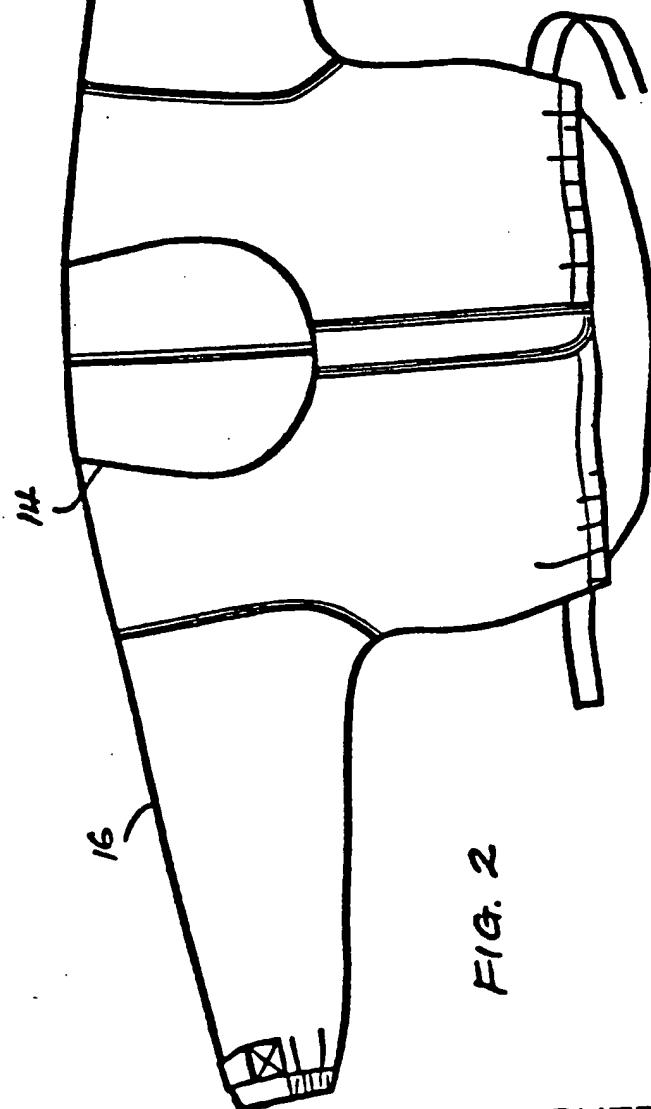
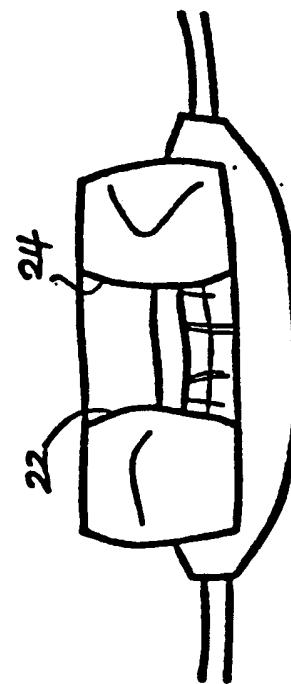
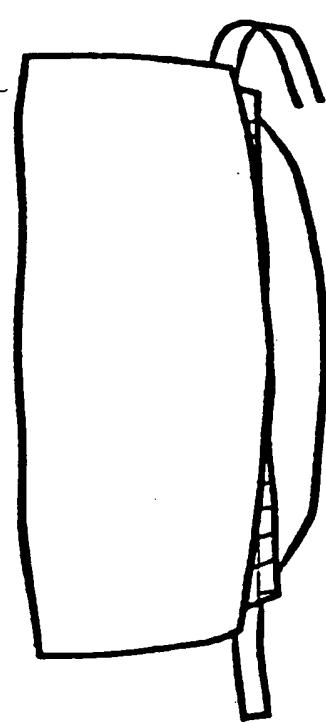
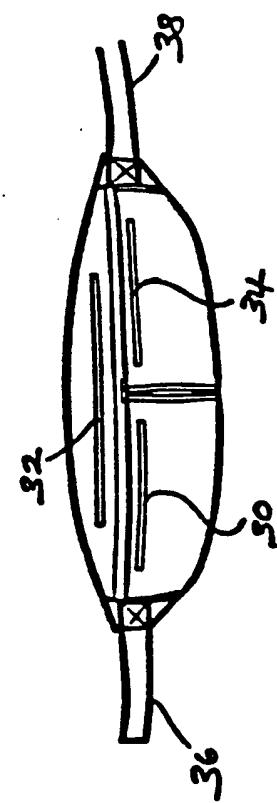
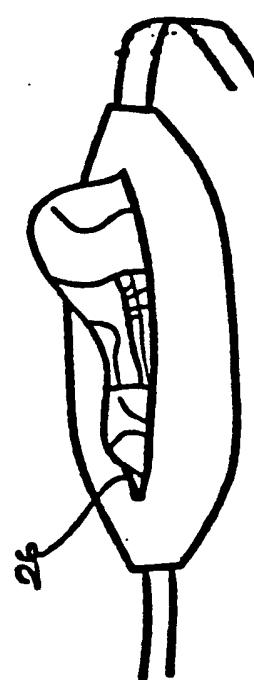
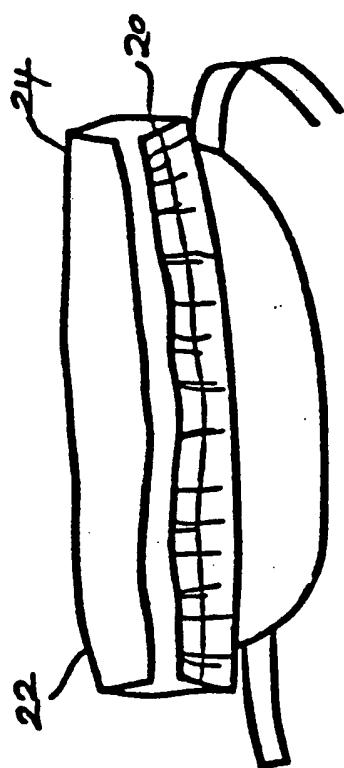
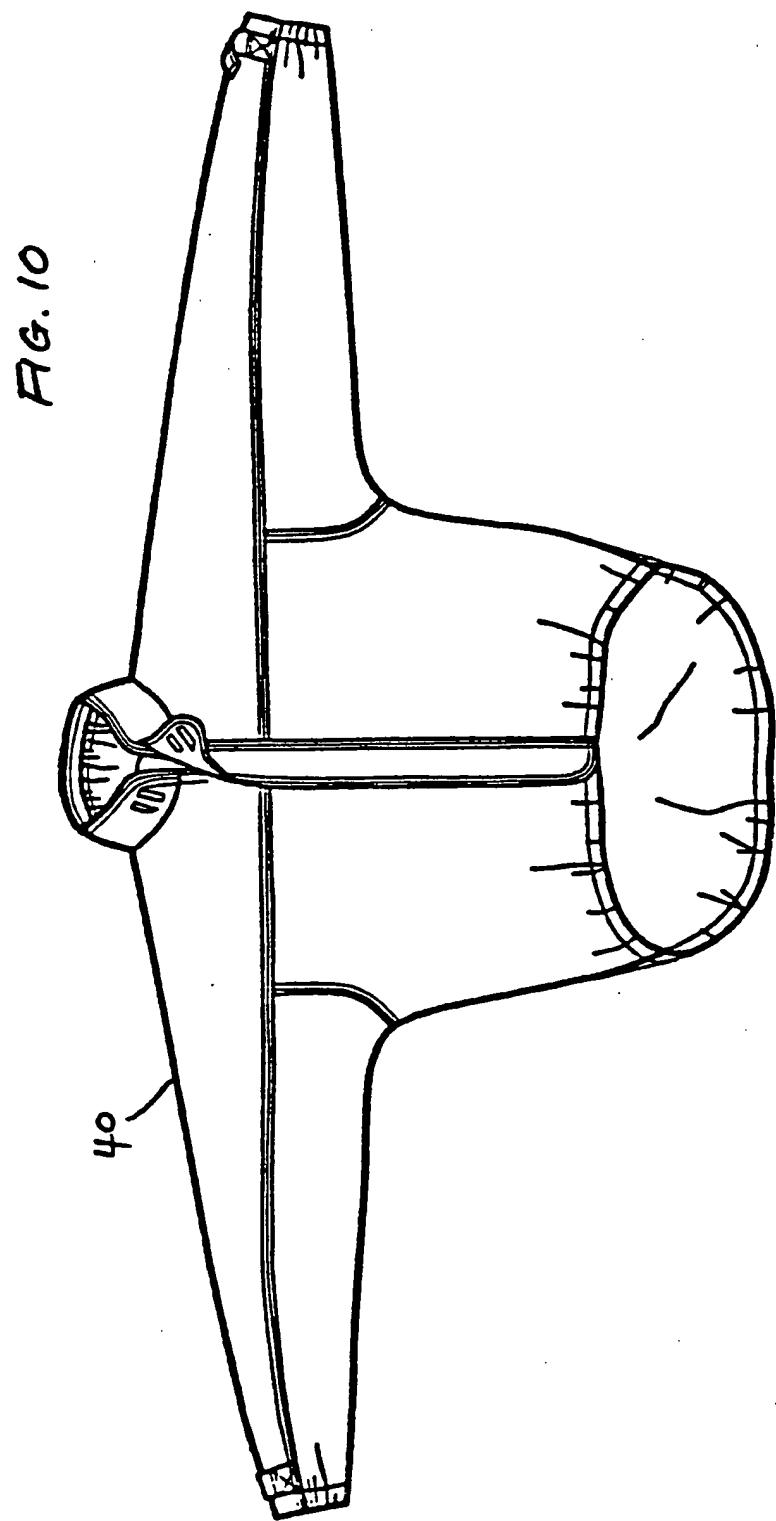
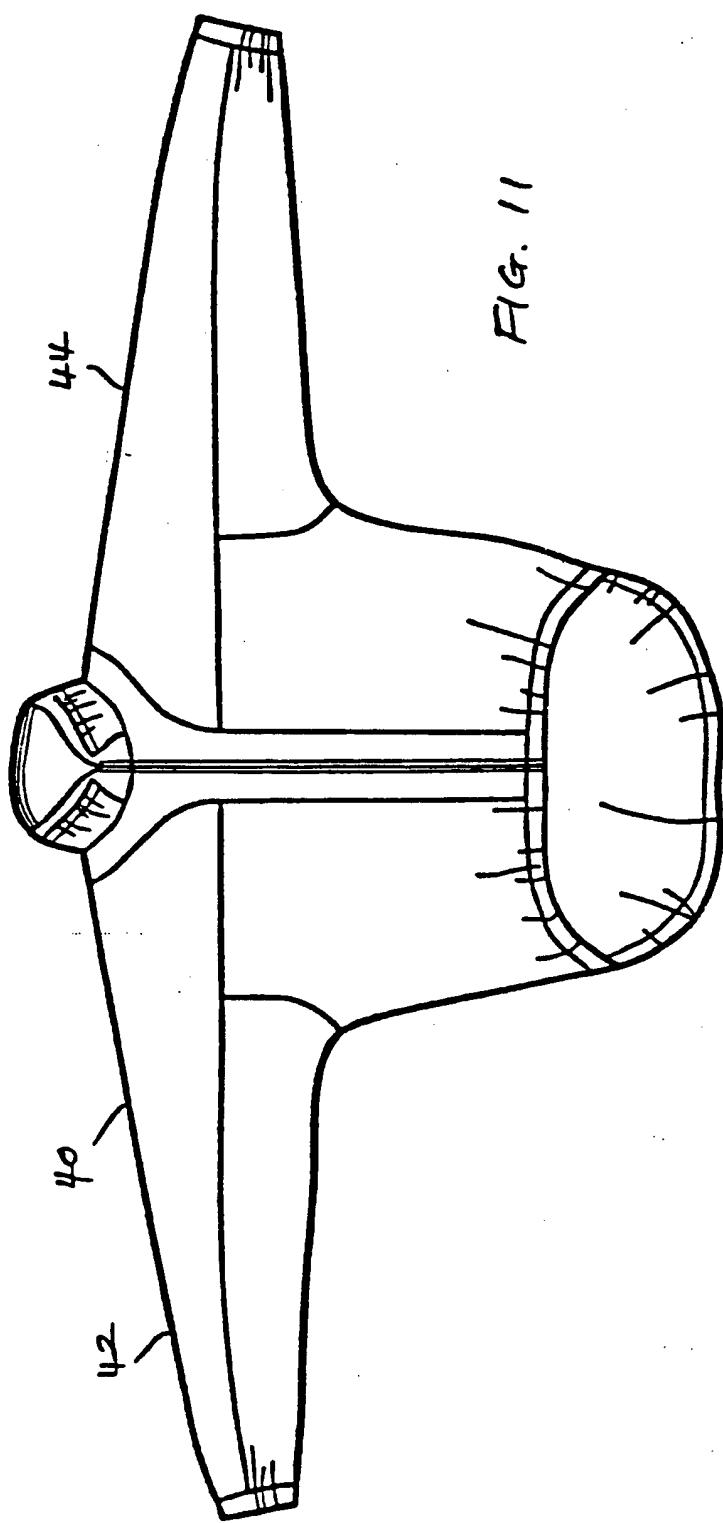


FIG. 2





5/21



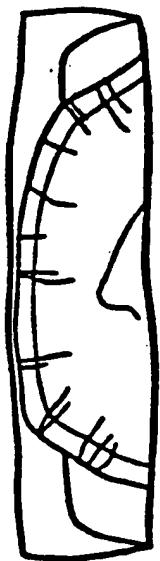


FIG. 14

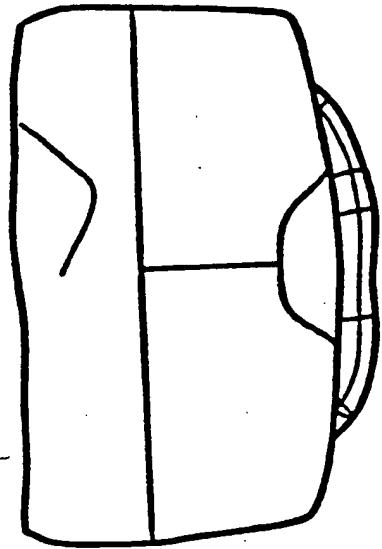


FIG. 13

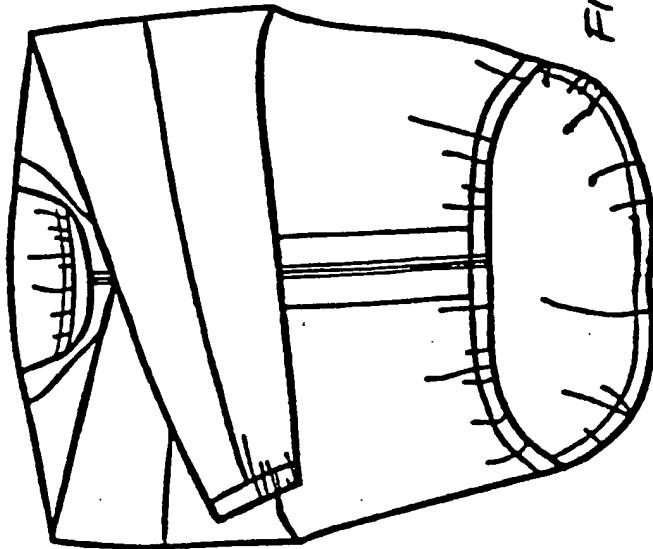


FIG. 12

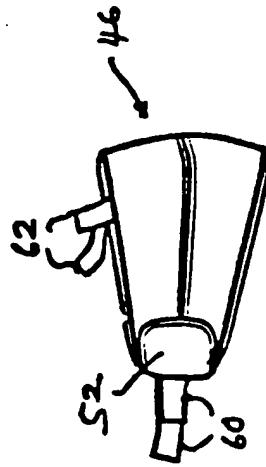


FIG. 17

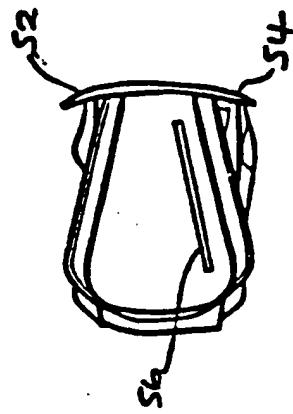


FIG. 16

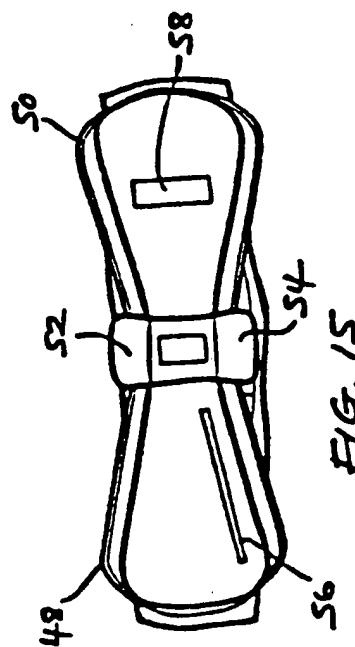
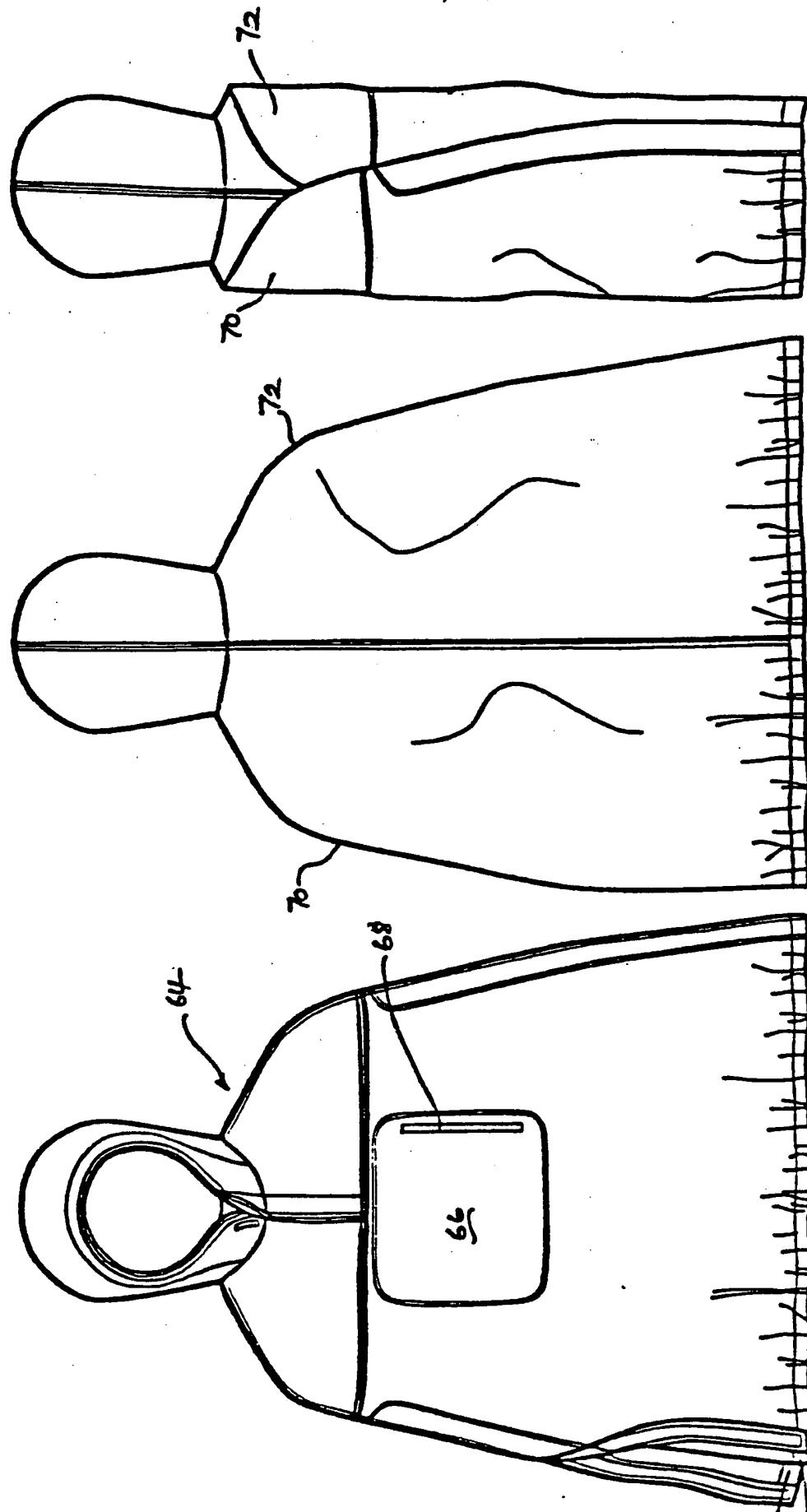


FIG. 15

7/21

**SUBSTITUTE SHEET**

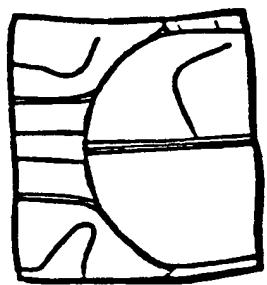


FIG. 23

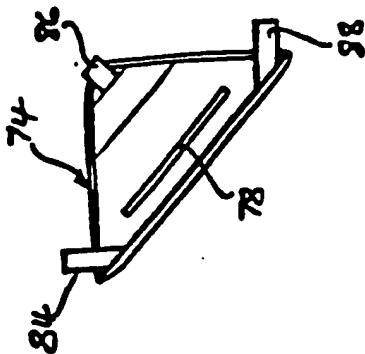


FIG. 26

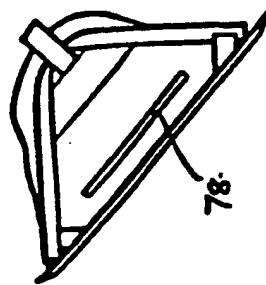


FIG. 25

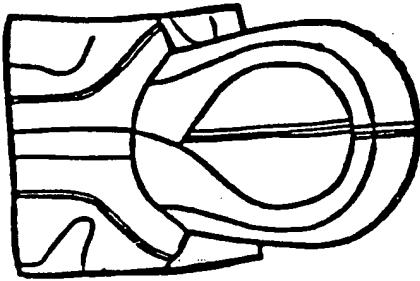


FIG. 22

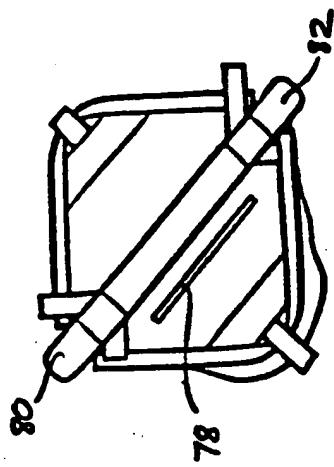


FIG. 24

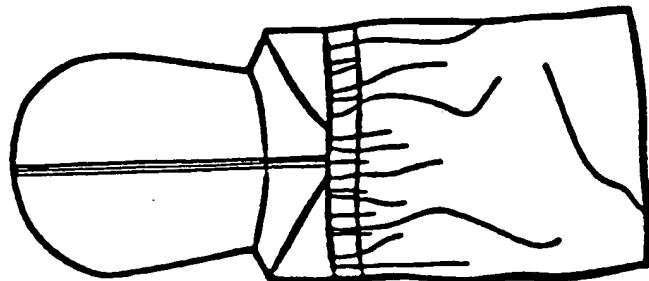
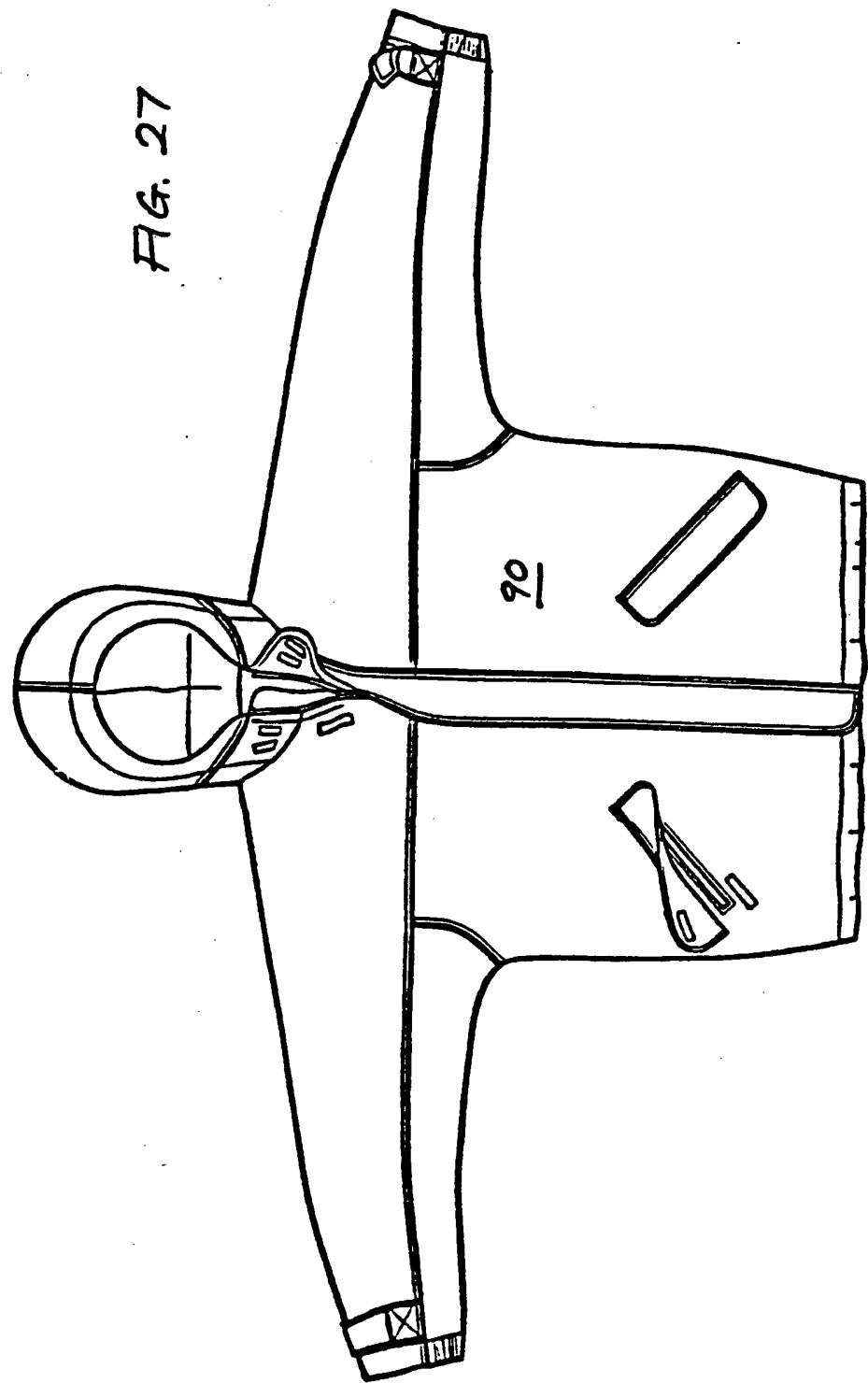
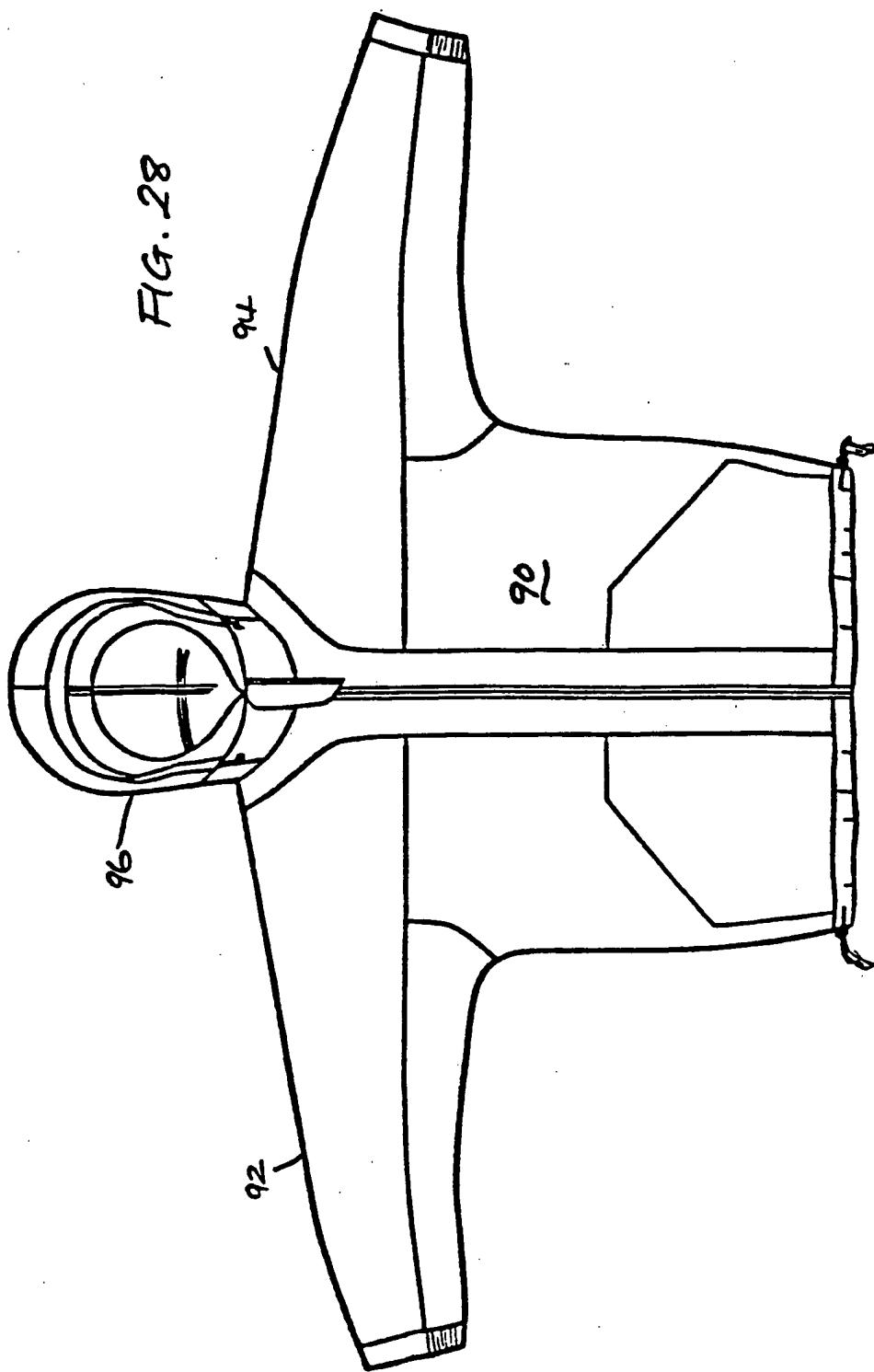


FIG. 21

9/21





11/21

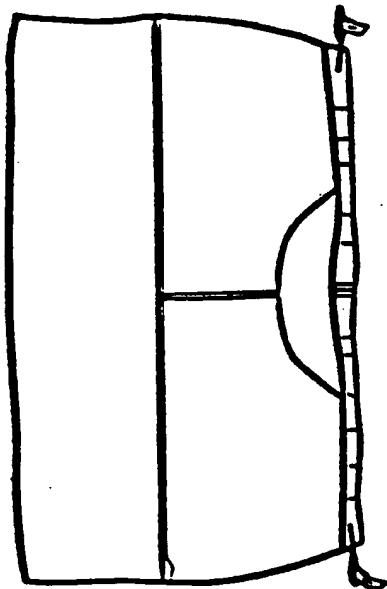


FIG. 30

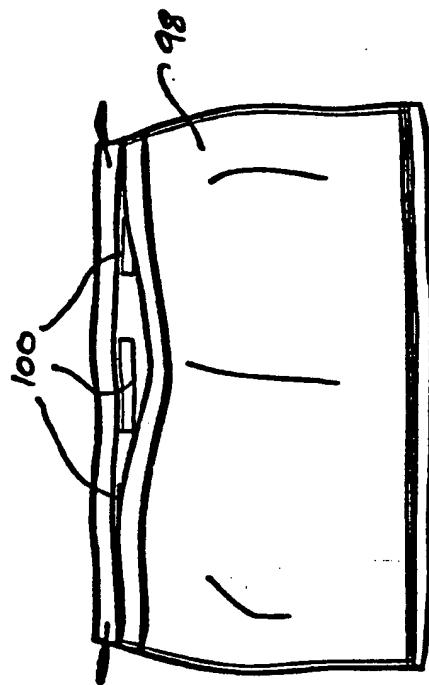


FIG. 31

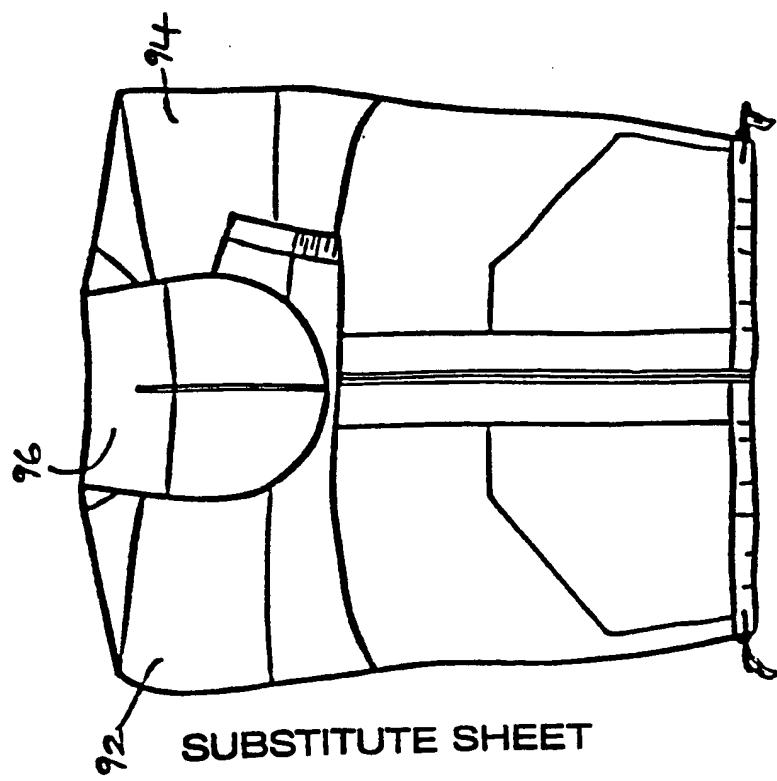


FIG. 29

12/21

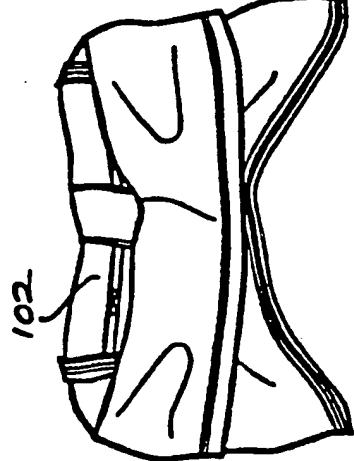


FIG. 33

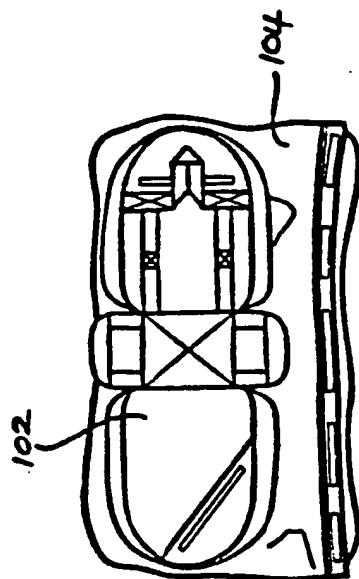


FIG. 35

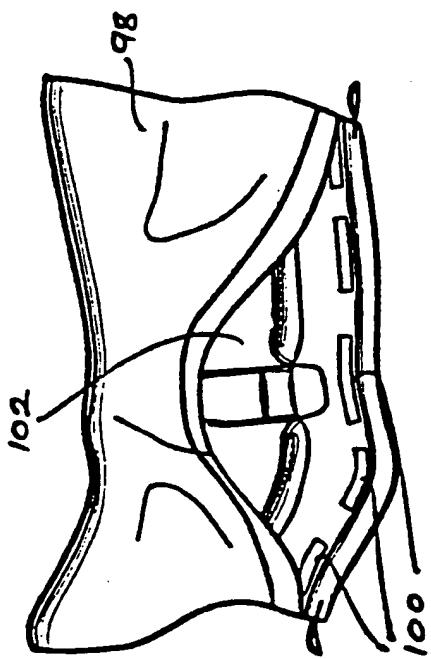


FIG. 32

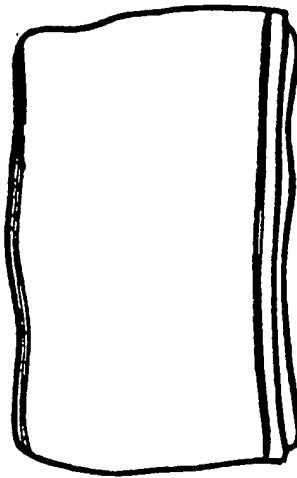


FIG. 34

13/21

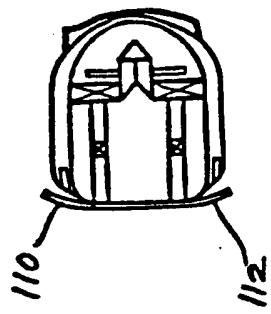


FIG. 37

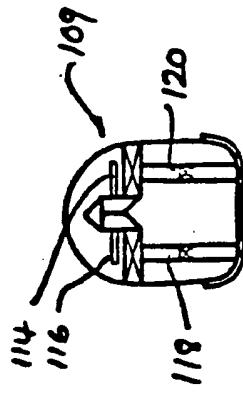


FIG. 39

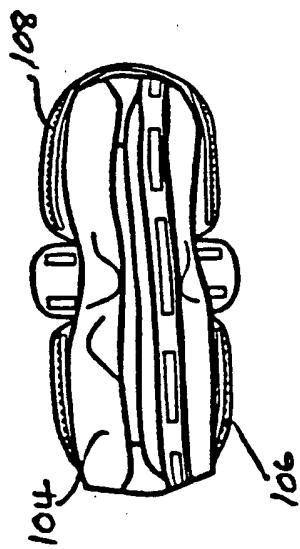


FIG. 37

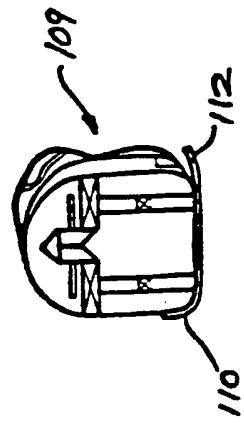
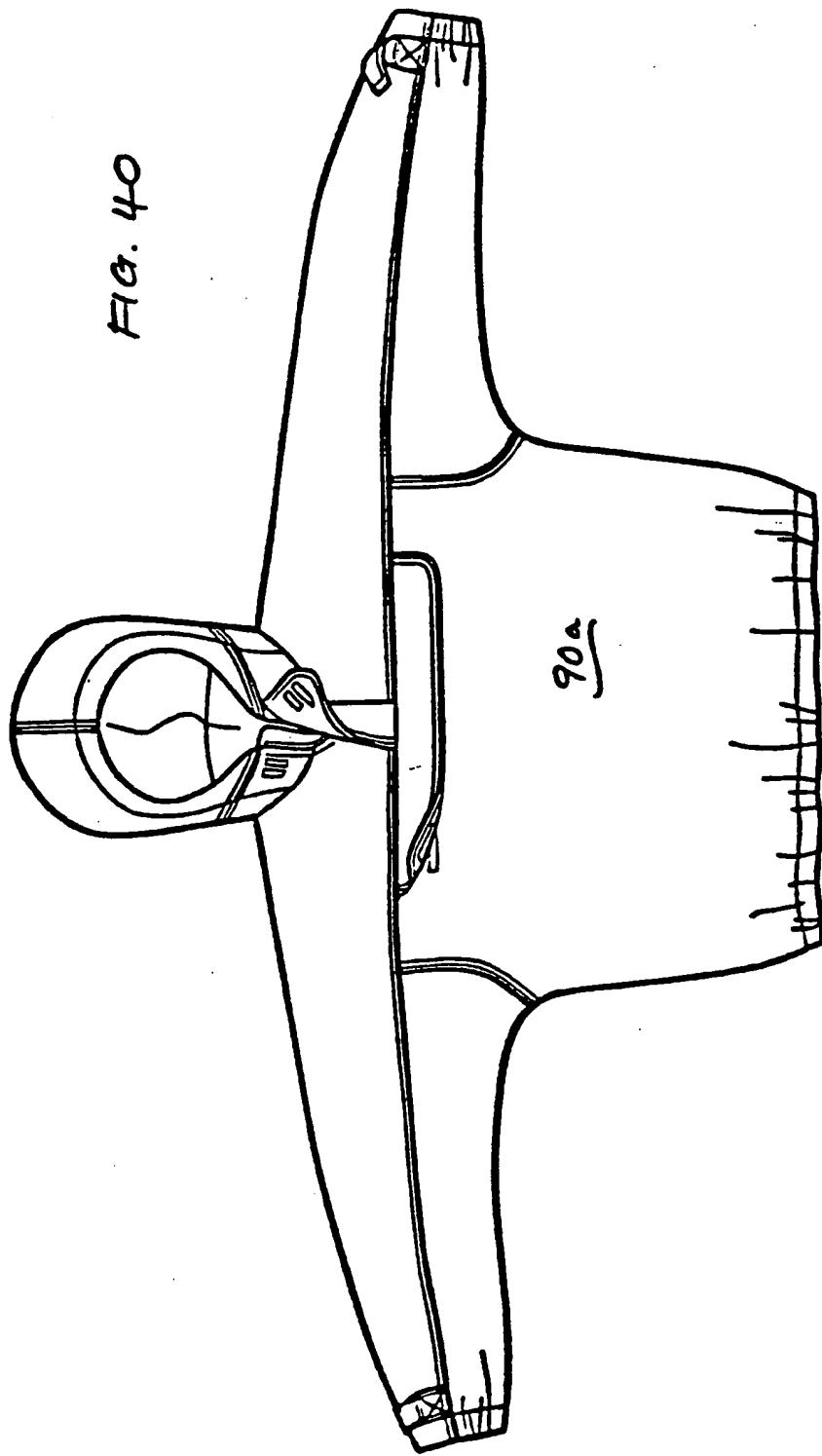
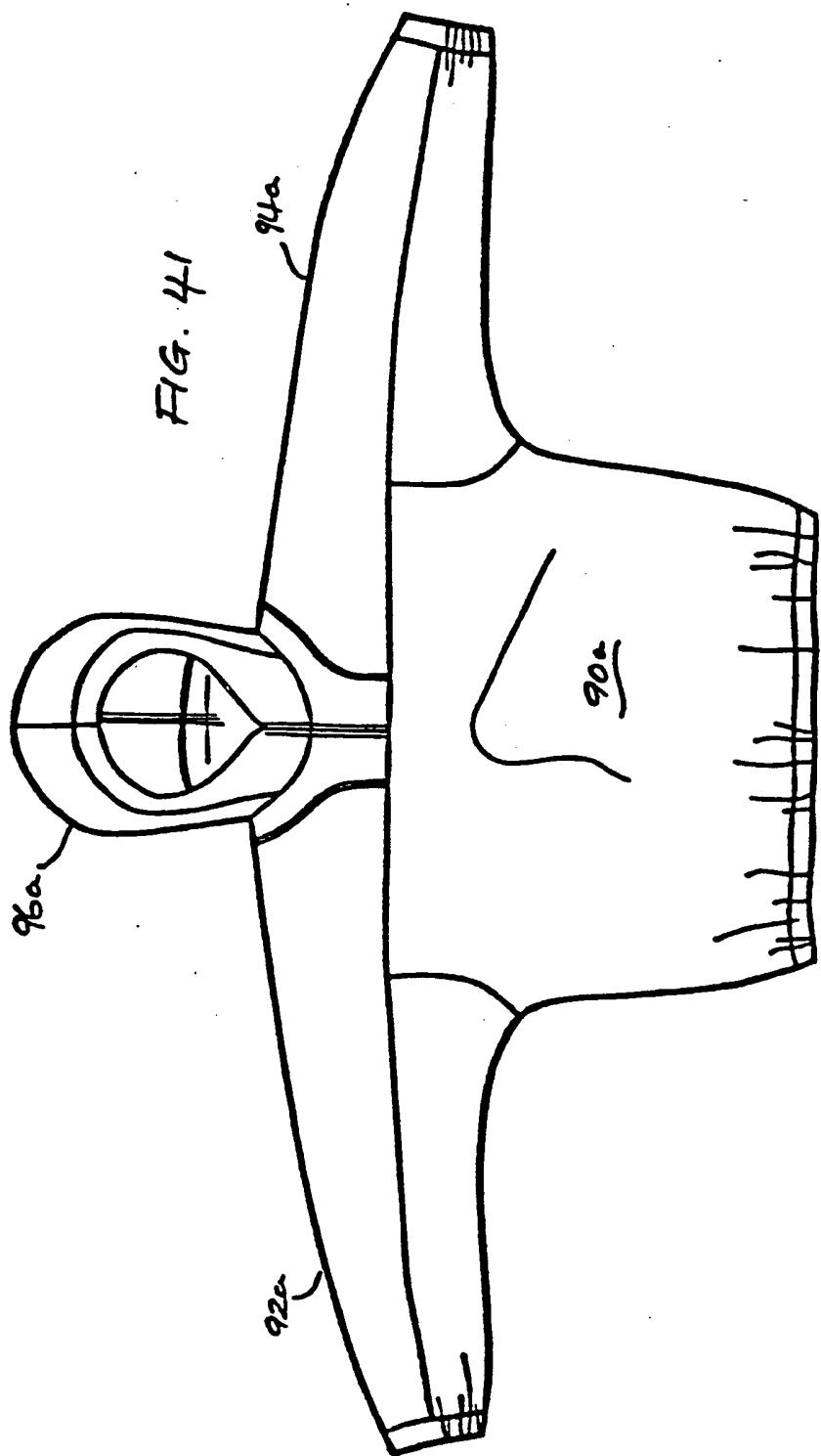


FIG. 39





16/21

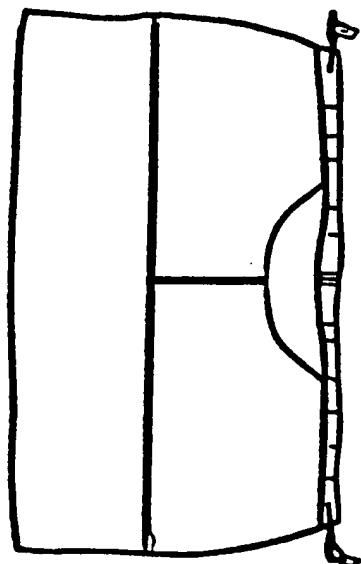


FIG. 43

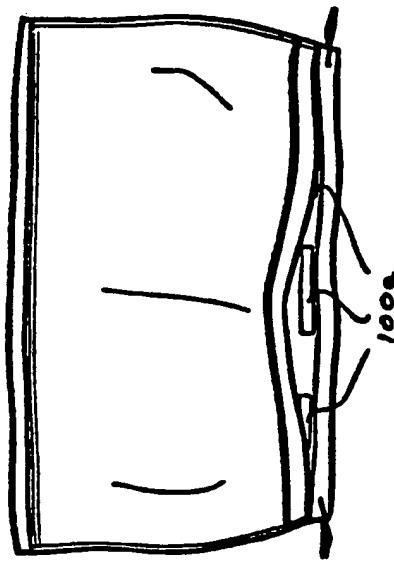


FIG. 44

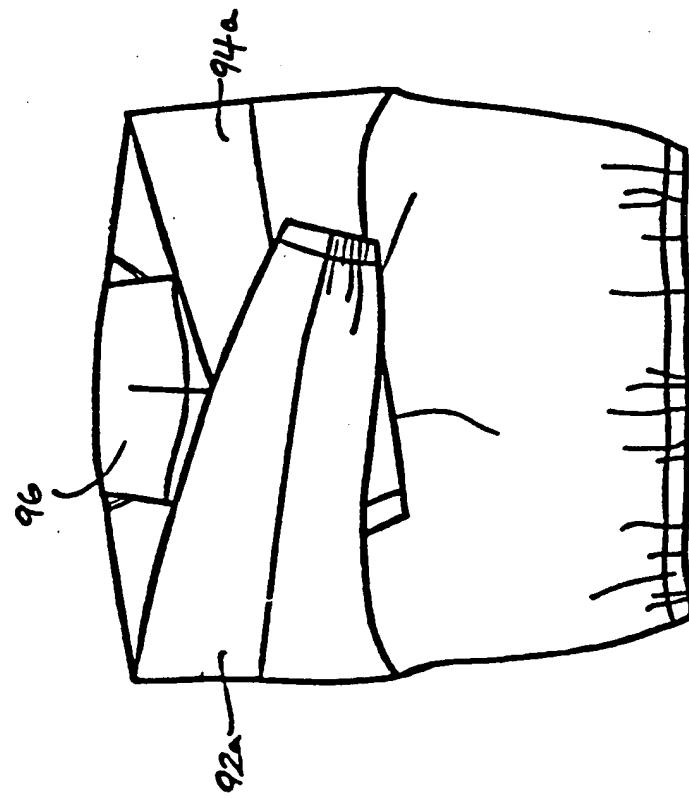


FIG. 42

17/21

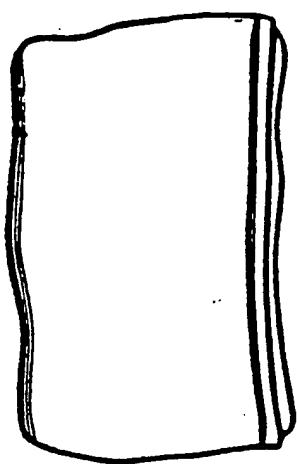


FIG. 47

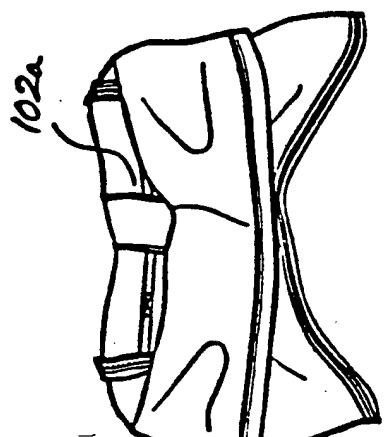


FIG. 46

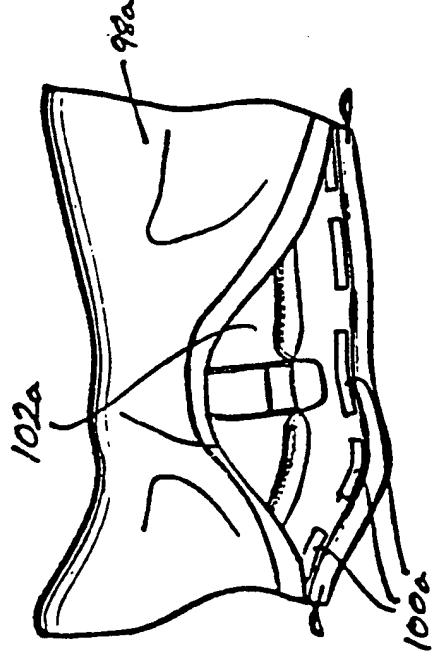


FIG. 45

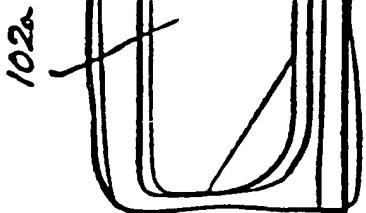


FIG. 48

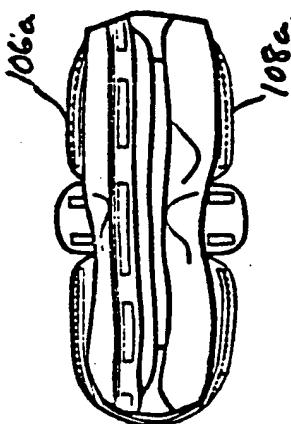


FIG. 49

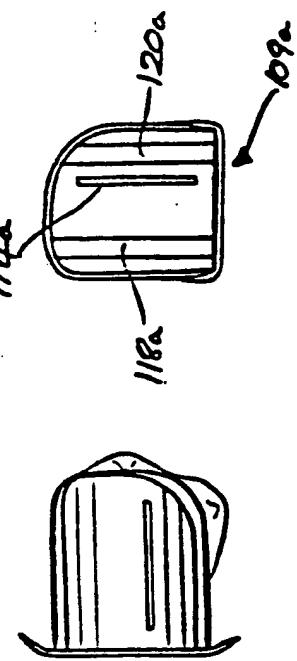


FIG. 50

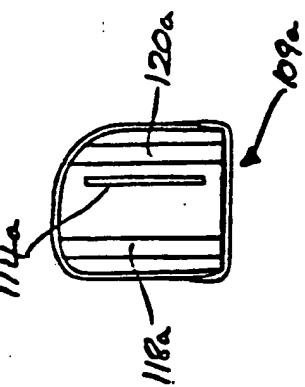
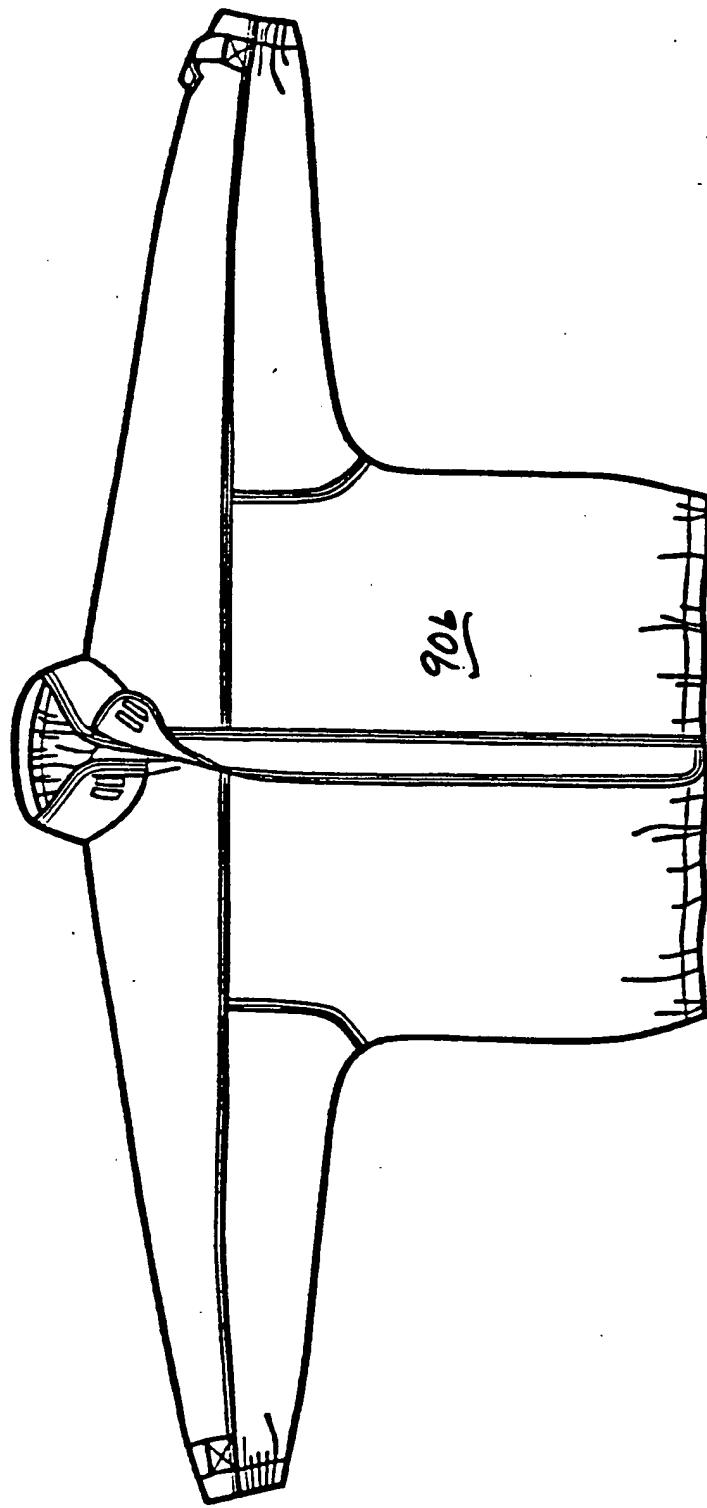
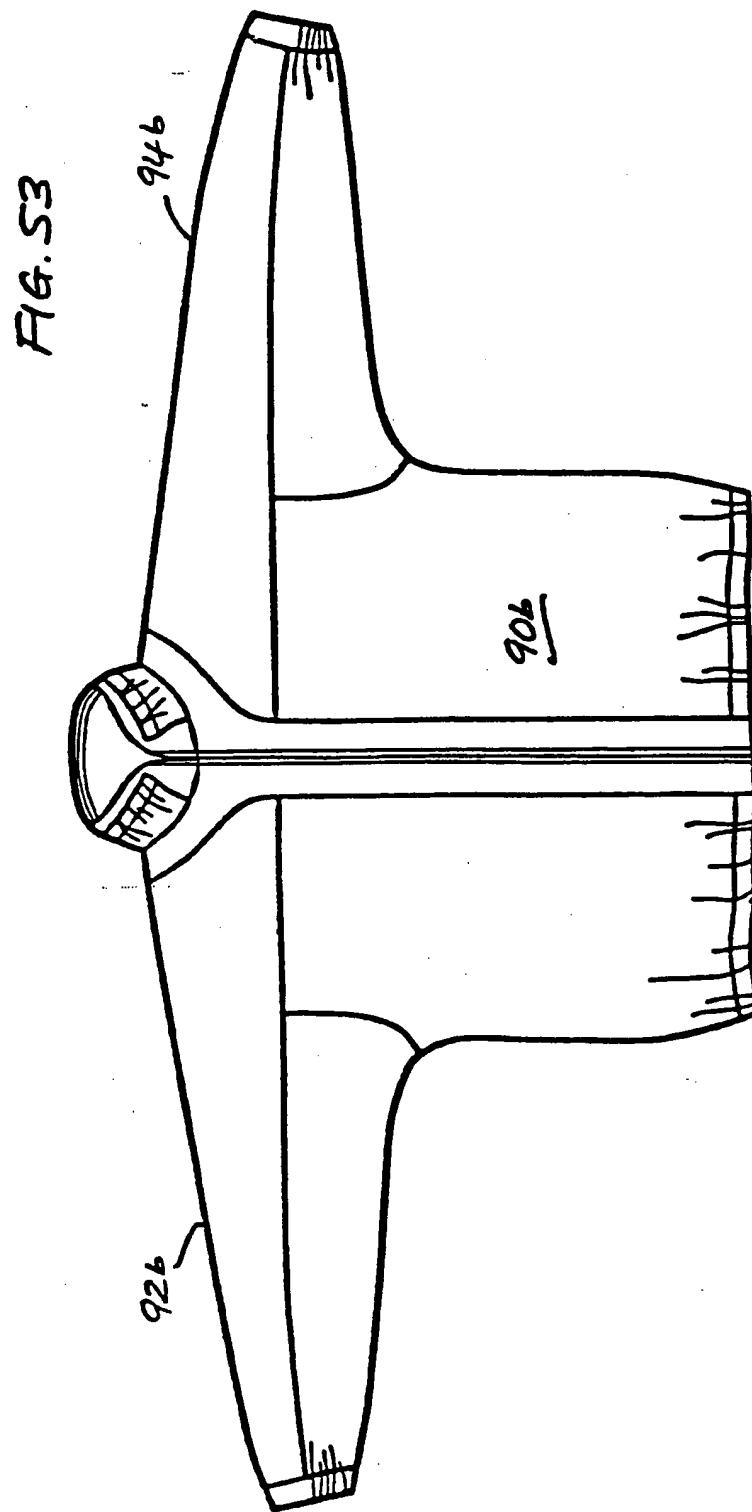


FIG. 51

FIG. 52





20/21

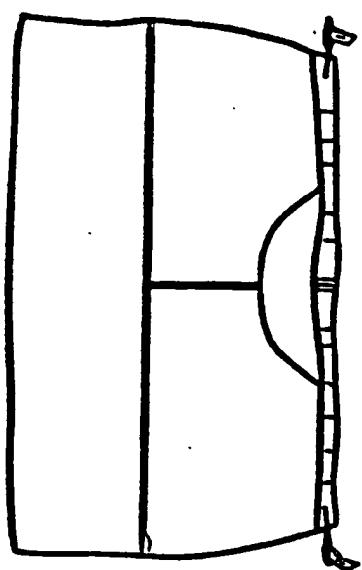


FIG. 55

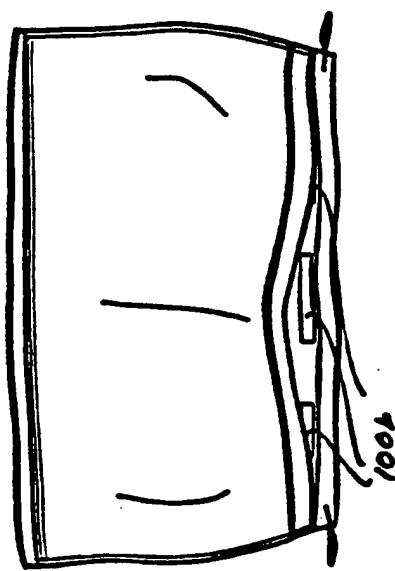


FIG. 56

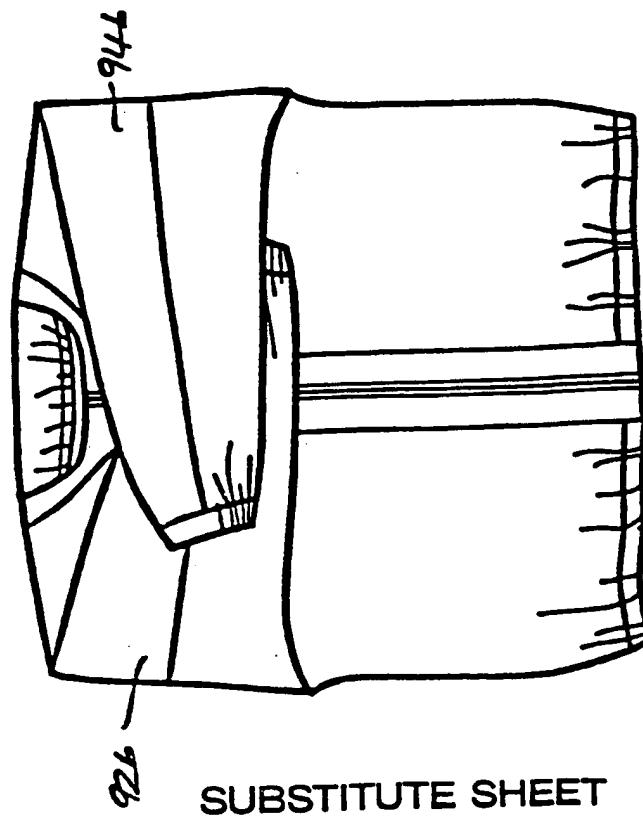


FIG. 54

SUBSTITUTE SHEET

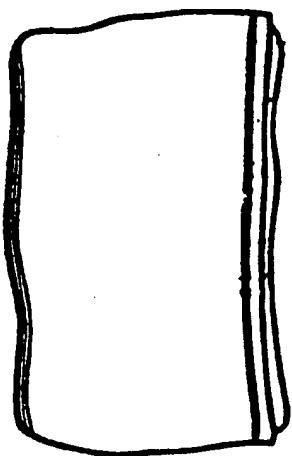


FIG. 59



FIG. 58

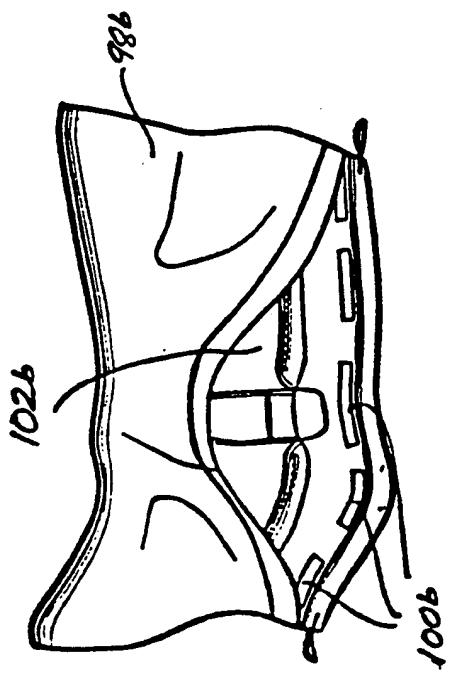


FIG. 57



FIG. 62

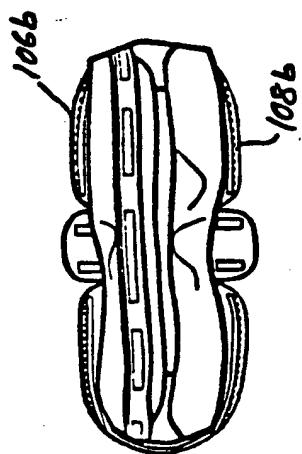


FIG. 61

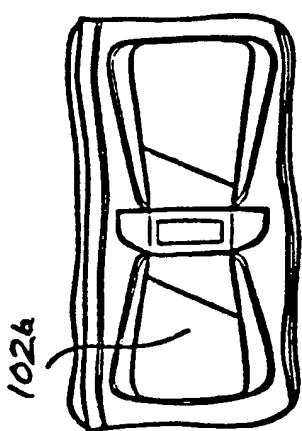


FIG. 60

SUBSTITUTE SHEET

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 93/01194

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all)⁶

According to International Patent Classification (IPC) or to both National Classification and IPC

Int.C1. 5 A45F4/12; A41D15/04

II. FIELDS SEARCHED

Minimum Documentation Searched⁷

Classification System	Classification Symbols
Int.C1. 5	A41D ; A45F

Documentation Searched other than Minimum Documentation
to the Extent that such Documents are Included in the Fields Searched⁸III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹

Category ¹⁰	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
X	US,A,4 475 251 (P. A. HOPKINS) 9 October 1984 see column 2, line 22 - column 5, line 10; figures 1-7 ---	1-8, 10-12
X	WO,A,8 401 092 (M. HAGER) 29 March 1984 see page 6, line 7 - page 11, line 30; figures 1-6 ---	1-6,8, 10,12
X	EP,A,0 233 097 (A. S. ACHOUR) 19 August 1987 see column 1, line 55 - column 3, line 2; figures 1,2 ---	1-3,5, 10,12
X	DE,A,2 645 889 (F. A. H. W. MEYER) 13 April 1978 see page 7, column 7; figures 1-5 ---	1-8,10, 12 -/-

¹⁰ Special categories of cited documents :

- ¹¹ "A" document defining the general state of the art which is not considered to be of particular relevance
- ¹² "E" earlier document but published on or after the international filing date
- ¹³ "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- ¹⁴ "O" document referring to an oral disclosure, use, exhibition or other means
- ¹⁵ "P" document published prior to the international filing date but later than the priority date claimed

¹⁶ "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention¹⁷ "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step¹⁸ "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art¹⁹ "&" document member of the same patent family

IV. CERTIFICATION

Date of the Actual Completion of the International Search 08 SEPTEMBER 1993	Date of Mailing of this International Search Report 13. 10. 93
International Searching Authority EUROPEAN PATENT OFFICE	Signature of Authorized Officer GARNIER F.M.A.C.

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)

Category	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
X	FR,A,2 475 376 (FUSALP) 14 August 1981 see page 3, line 31 - page 5, line 10; figures 1-6 ---	1-3,5,8, 10,12
A	EP,A,0 034 518 (ETABLISSEMENTS LEON DUHAMEL) 26 August 1981 see claims 1-3; figures 1-3 -----	9

ANNEX TO THE INTERNATIONAL SEARCH REPORT
ON INTERNATIONAL PATENT APPLICATION NO.

GB 9301194
SA 75515

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information. 08/09/93

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US-A-4475251	09-10-84	None		
WO-A-8401092	29-03-84	EP-A-	0120001	03-10-84
EP-A-0233097	19-08-87	FR-A-	2592776	17-07-87
DE-A-2645889	13-04-78	None		
FR-A-2475376	14-08-81	None		
EP-A-0034518	26-08-81	FR-A-	2475367	14-08-81

